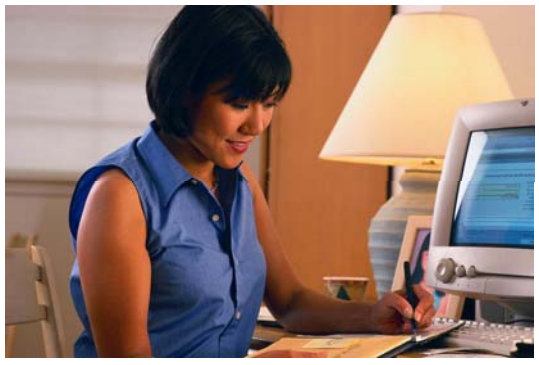
A tale of two bulbs

The average household has 40 light bulbs and uses 11 percent of its energy budget for lighting. An easy way to save money and energy is to switch to compact fluorescent lights (CFLs).

Regular incandescent bulbs – the kind shaped like a pear – create a lot of heat. (Have you accidentally touched one after it has been on for even a short while? Ouch!) Only about 5 percent of the energy used is converted to light – the rest is released as heat. That means in the summer you need to operate your home's air conditioning even more to combat the heat incandescent bulbs generate. Talk about energy *in*efficiency!

CFLs, by comparison, use at least two-thirds less energy, last up to 10 times longer and are cool to the touch. Though the purchase price is more than an incandescent bulb, the long-term savings are impressive. The equation is simple: less energy used means lower utility bills.



Choose and use

It is best to install CFLs in fixtures that are used at least 15 minutes at a time or several hours per day in frequently-used rooms. Outdoor fixtures are also a great place to use CFLs.

Since CFLs use less energy than their incandescent equivalent, the wattage listed on the package will be lower than what you have seen on traditional bulb packages. A CFL's package will list its incandescent equivalent. Use the following as a guideline:

Comparable Wattage of Incandescent and CFL Bulbs	
Incandescent Bulb	Compact Fluorescent Bulb
25-watt	5-watt
50-watt	9-watt
60-watt	15-watt
75-watt	20-watt
100-watt	25-watt
150-watt	32-watt
200-watt	42-watt

CFLs are also available in three-way and dimmable models.

Answers to your questions

The technology to produce fluorescent lights has significantly improved over the years. You may be surprised by these positive features of CFLs.

Fluorescent lights with electronic ballasts don't flicker or hum and quickly warm up to full brightness.

CFLs fit into almost any fixture that accepts standard bulbs.

The watt rating on a light fixture describes how much electricity the internal wiring of the fixture can safely accept. The lumens rating of a bulb describes how much light it will produce. If you have a lamp that can accept up to 75 watts of power, you can select a 20-watt CFL that will produce the same amount of light as a 75-watt incandescent. If you desire a brighter light in the fixture, you can use a 25-watt CFL that will produce as much light as a 100-watt incandescent. You'll be using slightly more energy than the 75-watt equivalent, but you'll still be getting more light for less power than before!

Change for change

Changing your lifestyle to incorporate energy-efficient practices will ultimately lead to extra change in your pocketbook.

	60-watt Incandescent Light	15-watt CFL
Cost of bulb	$0.40	$2.40
Lifetime of bulb	8 months	7 years
Cost of energy to operate over lifetime of 1 CFL (based on $0.08/kWh)	$48	$12
Total cost	$52.40	$14.40

The changes you make in your lighting choices will also contribute to a changing planet. You help curb greenhouse gas emissions when you use CFLs. Every CFL can prevent more than 450 pounds of greenhouse gas emissions. Think of the impact South Dakotans can make if each one of us changes just one bulb!

CFLs and mercury

The amount of mercury sealed within the glass tubing of a CFL is on average 5 milligrams – roughly equivalent to an amount that would cover the tip of a ballpoint pen. No mercury is released from the bulbs when they are intact or in use. By comparison, older thermometers contain about 500 milligrams of mercury.

The highest source of mercury in our air comes from burning fossil fuels such as coal, the most common fuel used in the U.S. to produce electricity. Because CFLs require less electricity than incandescent bulbs, less mercury is emitted at the power plant when these energy-saving bulbs are used.

If a CFL breaks, open nearby windows, carefully sweep up the fragments (do not use your hands) and wipe the area with a disposable paper towel to remove all glass fragments. Do not use a vacuum.

Contact your local solid waste agency about CFL recycling options. If your city permits you to put used or broken CFLs in the garbage, seal the CFL in two plastic bags and put into the outside trash. CFLs should not be disposed of in an incinerator.

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Shining a spotlight on Compact Fluorescent Light bulbs

SouthDakota

Public Utilities Commission
500 E. Capitol Ave.
Pierre, SD 57501-5070
www.puc.sd.gov
1-800-332-1782